

MTU AMERICA INC.

EXECUTIVE ORDER U-R-052-0035 New Off-Road Compression-Ignition Engines

Pursuant to the authority vested in California Air Resources Board by Sections 43013, 43018, 43101, 43102, 43104 and 43105 of the Health and Safety Code; and

Pursuant to the authority vested in the undersigned by Sections 39515 and 39516 of the Health and Safety Code and Executive Order G-14-012;

IT IS ORDERED AND RESOLVED: That the following compression-ignition engines and emission control systems produced by the manufacturer are certified as described below for use in off-road equipment. Production engines shall be in all material respects the same as those for which certification is granted.

MODEL YEAR	ENGINE FAMILY	DISPLACEMENT (liters)	FUEL TYPE	USEFUL LIFE (hours)		
2018	JMDDL76.3XTM	57.2, 76.3	2, 76.3 Diesel			
SPECIAL	FEATURES & EMISSION	CONTROL SYSTEMS	TYPICAL EQUIPMENT APPLICATION			
Ele Charç	ectronic Direct Injection, ge Air Cooler, Electronic Exhaust Gas Recirc	Control Module,	Crane, Loader, Tractor, Dozer, Pump, Compressor, Mine Haul Truck			

The engine models and codes are attached.

The following are the exhaust certification standards (STD) and certification levels (CERT) for non-methane hydrocarbon (NMHC), oxides of nitrogen (NOx), or non-methane hydrocarbon plus oxides of nitrogen (NMHC+NOx), carbon monoxide (CO), and particulate matter (PM) in grams per kilowatt-hour (g/kW-hr), and the opacity-of-smoke certification standards and certification levels in percent (%) during acceleration (Accel), lugging (Lug), and the peak value from either mode (Peak) for this engine family (Title 13, California Code of Regulations, (13 CCR) Section 2423):

RATED	EMISSION		EXHAUST (g/kW-hr)					OPACITY (%)		
POWER CLASS	STANDARD CATEGORY		NMHC	NOx	NMHC+NOx	co	PM	ACCEL	LUG	PEAK
ELSE > EGO KAN	Tier 4 Final	STD	0.19	3.5	N/A	3.5	0.04	N/A	N/A	N/A
ELSE > 560 kW		CERT	0.07	3.0		0.2	0.02			

BE IT FURTHER RESOLVED: That for the listed engine models, the manufacturer has submitted the information and materials to demonstrate certification compliance with 13 CCR Section 2424 (emission control labels), and 13 CCR Sections 2425 and 2426 (emission control system warranty).

Engines certified under this Executive Order must conform to all applicable California emission regulations.

This Executive Order is only granted to the engine family and model-year listed above. Engines in this family that are produced for any other model-year are not covered by this Executive Order.

Executed at El Monte, California on this

_ day of February 2018

Annette Hebert, Chief

Emissions Compliance, Automotive Regulations and Science Division

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Engine Model Summary Template

R/c

5/25/2018

1.Engine Cod	de 2.Engine Model	3.BHP@RPM (SAE Gross)	4.Fuel Rate: mm/stroke @ peak HP (for diesel only)	5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	6.Torque @ RPM (SEA Gross)	7.Fuel Rate: mm/stroke@peak torque	8.Fuel Rate: 9.Emission Control (lbs/hr)@peak torqueDevice Per SAE J1930
7266	12V4000C65	2500@1800	697		10409@1710	726	DFI, TC, CAC, ECM, EGR
7267	12V4000C65	2500@1900	673	-	9861@1805	695	DFI, TC, CAC, ECM, EGR
7268	12V4000C15	1542@1800	445		7351@1494	515	DFI, TC, CAC, ECM, EGR
7269	12V4000T95R	2253@1900	610		9035@1400	621	DFI, TC, CAC, ECM, EGR
7303	12V4000T95	2501@1900	670		10030@1400	686	DFI, TC, CAC, ECM, EGR
7302	12V4000T95L	2600@1900	701		10427@1400	713	DFI, TC, CAC, ECM, EGR
7304	12V4000C35	2012@1800	561		9588@1494	655	DFI, TC, CAC, ECM, EGR
7305	12V4000C55	2347@1900	632		9258@1805	633	DFI, TC, CAC, ECM, EGR
7312	★★ 16V4000C65	3218@1800	676		13430@1710	708	DFI, TC, CAC, ECM, EGR
7330	12V4000C25	1676@1800	474		7985 @ 1492	549	DFI, TC, CAC, ECM, EGR
7331	¥ ★16V4000T95	3004@1900	693		13385@1675	708	DFI, TC, CAC, ECM, EGR
	7266 7267 7268 7269 7303 7302 7304 7305 7312 7330	7266 12V4000C65 7267 12V4000C65 7268 12V4000C15 7269 12V4000T95R 7303 12V4000T95 7302 12V4000T95L 7304 12V4000C35 7305 12V4000C55 7312 ★★16V4000C65 7330 12V4000C25	1.Engine Code 2.Engine Model (SAE Gross) 7266 12V4000C65 2500@1800 7267 12V4000C65 2500@1900 7268 12V4000C15 1542@1800 7269 12V4000T95R 2253@1900 7303 12V4000T95 2501@1900 7302 12V4000T95L 2600@1900 7304 12V4000C35 2012@1800 7305 12V4000C55 2347@1900 7312 ★ 16V4000C65 3218@1800 7330 12V4000C25 1676@1800	1.Engine Code 2.Engine Model 3.BHP@RPM (SAE Gross) mm/stroke @ peak HP (for diesel only) 7266 12V4000C65 2500@1800 697 7267 12V4000C65 2500@1900 673 7268 12V4000C15 1542@1800 445 7269 12V4000T95R 2253@1900 610 7303 12V4000T95 2501@1900 670 7302 12V4000T95L 2600@1900 701 7304 12V4000C35 2012@1800 561 7305 12V4000C55 2347@1900 632 7312 ★ 16V4000C65 3218@1800 676 7330 12V4000C25 1676@1800 474	1.Engine Code 2.Engine Model 3.BHP@RPM (SAE Gross) mm/stroke @ peak HP (for diesel only) (lbs/hr) @ peak HP (for diesel only) 7266 12V4000C65 2500@1800 697 7267 12V4000C65 2500@1900 673 7268 12V4000C15 1542@1800 445 7269 12V4000T95R 2253@1900 610 7303 12V4000T95 2501@1900 670 7302 12V4000T95L 2600@1900 701 7304 12V4000C35 2012@1800 561 7305 12V4000C55 2347@1900 632 7312 ★★16V4000C65 3218@1800 676 7330 12V4000C25 1676@1800 474	1.Engine Code 2.Engine Model 3.BHP@RPM (SAE Gross) mm/stroke @ peak HP (flos/hr) @ peak HP (for diesels only) 6.Torque @ RPM (SEA Gross) 7266 12V4000C65 2500@1800 697 10409@1710 7267 12V4000C65 2500@1900 673 9861@1805 7268 12V4000C15 1542@1800 445 7351@1494 7269 12V4000T95R 2253@1900 610 9035@1400 7303 12V4000T95 2501@1900 670 10030@1400 7304 12V4000C35 2012@1800 561 9588@1494 7305 12V4000C55 2347@1900 632 9258@1805 7312 ★★16V4000C65 3218@1800 676 13430@1710 7330 12V4000C25 1676@1800 474 7985@1492	1.Engine Code 2.Engine Model 3.8HP@RPM (SAE Gross) mm/stroke @ peak HP (for diesel only) (lbs/hr) @ peak HP (sEA Gross) 6.Torque @ RPM (SEA Gross) mm/stroke@peak torque 7266 12V4000C65 2500@1800 697 10409@1710 726 7267 12V4000C65 2500@1900 673 9861@1805 695 7268 12V4000C15 1542@1800 445 7351@1494 515 7269 12V4000T95R 2253@1900 610 9035@1400 621 7303 12V4000T95 2501@1900 670 10030@1400 686 7304 12V4000T95L 2600@1900 701 10427@1400 713 7305 12V4000C35 2012@1800 561 9588@1805 633 7312 ★★ 16V4000C65 3218@1800 676 13430@1710 708 7330 12V4000C25 1676@1800 474 7985@1492 549

* New ratings added for running change ** 76.3L displacement engine models. The rest have a displacement of 57.2L